

REMARKS

General Remarks

Claims 1-9 are all the claims currently pending in the present application.

With the current Office Action, the Examiner acknowledges Applicant's claim to foreign priority and the receipt of the certified copy of the priority document. The Examiner also returns a signed and initialed copy of the PTO-Form 1449 filed with the March 9, 2001 IDS. However, Applicant respectfully notes that the Examiner has failed to return a duly signed and initialed copy of the PTO-Form 1449 filed with the February 1, 2002 IDS. The Examiner is respectfully requested to do so with the following office communication.

Objections. The Title, Abstract, and Specification of the present application stand objected to due to informalities. With this Amendment, Applicant amends the Title, Abstract, and Specification, as shown, in order to correct these informalities. However, regarding the Examiner's assertion that "become" should be changed to "becomes" on line 18 of page 7 (Office Action, p.2), Applicant respectfully submits that "become" is grammatically correct in that sentence, as the subject of the sentence, "the construction and the control," is plural.

Therefore, Applicant submits that the Title, Abstract, and Specification of the present application are currently in proper form and respectfully requests that the objections thereto be reconsidered and withdrawn.

Additionally, Claims 6, 8, and 9 stand objected to due to informalities. With this Amendment, Applicant amends Claims 6, 8, and 9 in order to correct those informalities.

Applicant respectfully submits that these amendments are not intended to narrow the scope of the original claims, but are rather for precision of language and to explicitly recite within the claim what was believed to have already been implicitly defined therein. Accordingly, these amendments do not foreclose application of reasonable equivalents.

Applicant therefore respectfully requests that the objections to Claims 6, 8, and 9 be reconsidered and withdrawn.

Allowable subject matter. The Examiner indicates that 3-5 are objected to as dependent on a rejected base claim, but would be allowable if rewritten into independent form including all the limitations of the claims from which they depend. Applicant respectfully requests that the rewriting of these claims be held in abeyance until the Examiner has considered the arguments presented herein with respect to claim 1, from which claims 3-5 depend.

Claim rejections. Claims 1-2, and 6-9 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Applicant's admitted prior art ("AAPA") in view of Kobayashi, U.S. Patent Publication No. 2002/0067711 ("Kobayashi"). Applicants respectfully traverse this rejection as set forth below.

Claims 1, 2, 6, and 7

Regarding the Examiner's §103(a) rejection of Claims 1, 2, 6 and 7 over AAPA and Kobayashi, Applicant respectfully submits that the cited combination of references fails to teach or suggest each of the limitations of the present invention as recited in Claims 1, 2, 6, and 7.

Claim 1. Regarding Claim 1, Applicant submits that the cited combination of references fails to teach or suggest at least a timing separation means, as claimed, for separating the receiving timing of data transmitted by a flying object from the control timing of a direction of an antenna, when the receiving timing overlaps with the control timing. The Examiner acknowledges that AAPA fails to teach or suggest this limitation, and therefore relies on Kobayashi. (Office Action, p. 3).

Kobayashi is generally directed to a wireless LAN system including a mobile master station 12 and a plurality of wireless LAN terminals 15. (Abstract, Figure 2). According to Kobayashi, data is generally transmitted between the master station and the satellite stations in data bursts. (Para. 48). The directivity of the antennae of the satellite stations can be changed, and in order to change the directivity of an antenna, the satellite station transmits a control frame to the master station. (Para. 45). When the master station receives the control frame, it transmits a carrier wave, and the satellite station then determines the direction of change of the antenna based on the direction in which the electric field density of the carrier wave is the highest. (Para. 46). The satellite station may be prompted to transmit a control frame, in order to change the directivity of the antenna, at the commencement of communication or when communications deteriorate after the commencement of communication.

The Examiner refers to paragraphs 79 and 81 of Kobayashi as teaching the timing separation means, as recited in Claim 1. (Office Action, p. 4). Paragraph 79 of Kobayashi refers to a control frame FCS error checking unit of a satellite station which checks data, input from the master station via the radio unit, and detects errors in a control frame returned from the master

station. If the FCS error checking unit detects an error, a determination is made that there is a collision between a normal data frame sent from another satellite station and the data transmitted between the satellite station and the master station. Therefore, the “collision” described in Kobayashi is between data transmission between a satellite and a master station and a data frame transmitted by another satellite station. There is no teaching or suggestion in Kobayashi of any timing overlap, as recited in Claim 1, or, more specifically, of a timing overlap between receiving timing of data transmitted by a flying object and control timing for controlling the direction of an antenna.

Additionally, paragraph 79 of Kobayashi describes that when a determination of a collision is made, a random back-off timer determines a random back-off time before a control frame is re-transmitted from the satellite station. This back-off time is a randomly-generated time, the purpose of which is to re-transmit a control frame from the satellite station at a time when it is unlikely that it will collide with the normal data sent from another satellite station. The back-off timer, therefore, fails to teach or suggest a timing separation means for separating the receiving timing of data transmitted by a flying object from the control timing of a direction of an antenna. The Examiner refers to the satellite station of Kobayashi as similar to the claimed earth station (Office Action, p. 3). Therefore, the back-off timer, the purposes of which is to avoid collision between a control frame transmitted by the satellite station and data from another satellite station fails to teach or suggest separating a receiving timing of data transmitted by a flying object, from any other timing, as claimed, because it is unrelated to the transmission of any data by a flying object or the reception of any data by an earth station.

Therefore, for at least these reasons, Applicant submits that Claim 1 is patentable over the cited combination of references, and respectfully requests that the rejection thereof be reconsidered and withdrawn.

Claims 2, 6, and 7. Regarding Claims 2, 6, and 7, Applicant submits that these claims are patentable at least by virtue of their dependence on Claim 1.

Additionally, regarding Claim 2, Applicant submits that the cited combination of references fails to teach or suggest at least delaying control timing compared with receiving timing. Again, the Examiner refers to paragraph 79 of Kobayashi as teaching this limitation. (Office Action, p. 5). However, as discussed above, there is no discussion in Kobayashi of separating a control timing from a reception timing (of data transmitted by a flying object and received by an earth station). Therefore, Kobayashi also fails to teach or suggest delaying a control timing, compared with a receiving timing, as recited in Claim 2.

Therefore, for at least these reasons, Applicant submits that Claims 2, 6, and 7 are patentable over the cited combination of references and respectfully requests that the rejection thereof be reconsidered and withdrawn.

Claim 8

Regarding Claim 8, Applicant submits that the cited combination of references fails to teach or suggest at least accumulation means, as claimed, for storing a beacon signal transmitted by a flying object.

The Examiner fails to particularly point to any portion of AAPA or the Kobayashi reference which teaches or suggests this limitation. Applicant respectfully submits that no portion of AAPA teaches or suggests accumulation means, as claimed. Additionally, Applicant submits that Kobayashi also fails to teach or suggest any accumulation means for storing, as recited, which is transmitted by a flying object. As discussed above with respect to Claim 1, Kobayashi describes a carrier wave, transmitted by a master station, which is used by a satellite station to determine the directivity of an antenna. However, there is no teaching or suggestion in Kobayashi of any means for storing such a signal.

Further, Applicant submits that the cited combination of references fails to teach or suggest at least disable signal generation means, as claimed for making a disable signal active when a modem detects a start delimiter in a frame transmitted by a flying object. The Examiner acknowledges that AAPA fails to teach or suggest this limitation, and therefore relies on paragraphs 79 and 81 of Kobayashi as teaching this limitation.

Applicant notes that the Examiner's position seems to intimate that that a disable signal generation is inherent in a back-off timer which generates a random back-off time. (Office Action, p. 6). Applicant does acknowledge that in a §103(a) rejection, when a combination of references fails to expressly disclose each and every element of a claimed invention, as in this case, it can be argued that a reference "inherently" teaches the missing element or elements of the claimed invention. (*See In re Oelrich*, 666 F.2d 578, 581 (Fed. Cir. 1981)). However, evidence of inherency "must make it clear that the missing descriptive matter is *necessarily present* in the thing described in the reference, and that it would be so recognized by persons of

ordinary skill.” (*Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991)(emphasis added)). “Inherency however may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.” (*Id. citing In re Oelrich quoting Hansgirk v. Kemmer*, 102 F.2d 212,214 (CCPA 1939)(emphasis in original)). Even if the prior art reference could have equally been used or made with only two possibilities a patent claim which claims one of the two possibilities will not be anticipated because that limitation was not necessarily present in the prior art disclosure. (*See Finnigan Corp. v. I.T.C.*, 51 USPQ2d 1001, 1009-10 (Fed. Cir. 1999)). Therefore, even if Kobayashi described a back-off time used to prevent the overlapping of the timing of a data frame transmitted by a flying object and the timing of the receipt of a beacon signal from a flying object, there is no evidence either in the reference itself or in the common knowledge available to one of skill in the art at the time of the present invention that such a back-off time would necessarily require the claimed disable signal.

Further, as noted above, and by the Examiner in the current Office Action (Office Action, p. 6-7) the back-off time is used when it is detected that a control signal transmitted by one satellite station collides with data transmitted by another satellite station. Therefore, there is no teaching or disclosure in Kobayashi of any possible overlap between the timing of a data frame transmitted by a flying object and the timing of the receipt of a beacon signal from a flying object

Therefore, for at least these reasons, Applicant submits that Claim 8 is patentable over the cited combination of references and respectfully requests that the §103(a) rejection of Claim 8 be reconsidered and withdrawn.

Claim 9

Regarding Claim 9, Applicant submits that Claim 9 is patentable for at least the same reasons as discussed above with respect to Claim 8, and for the following additional reasons.

As discussed above with respect to Claim 8, Kobayashi fails to teach or suggest a disable signal, as claimed. Additionally, Applicant submits that the cited combination of references fails to teach or suggest making a disable signal active when a modem detects a start delimiter in a frame transmitted by a flying object, as claimed. As discussed above, the Examiner asserts that the back-off time described in Kobayashi inherently requires a disable signal, as claimed. However, Applicant notes that Kobayashi describes that the back-off time is prompted by a determination that there is a collision between a control signal transmitted by a satellite station and data transmitted by another satellite station. (Para. 79). There is no teaching or disclosure in Kobayashi that the back-off time, or that the activation of any disable signal is prompted by a modem detecting a start delimiter, as claimed.

Further, Applicant submits that there is no teaching or suggestion in the cited combination of references of allowing an antenna beacon signal to be stored in an accumulation means, as claimed. As discussed above with respect to Claim 8, the cited combination of references fails to teach or suggest an accumulation means, as claimed.

Still further, Applicant submits that there is no teaching or suggestion in the cited combination of references of starting the controlling of the direction of an antenna of an earth station when a modem completes receiving data of a data frame, as claimed. The Examiner acknowledges that AAPA fails to teach or suggest this limitation, and therefore relies on Kobayashi paragraphs 79 and 81 to teach this limitation. (Office Action, p. 8-9). However, contrary to the assertions of the Examiner, there is no teaching or suggestion in Kobayashi of this limitation. As described in Kobayashi, the controlling of the direction of the antenna of the satellite station is performed when a carrier wave is transmitted from the master station and received by the satellite station. (Para. 46). The back-off time that the Examiner refers to, and that is described at paragraph 79 of Kobayashi, is unrelated to the receipt of the carrier wave by the satellite station. Rather, the back-off time, as discussed above, is prompted by a detected collision between a control signal transmitted from a satellite station to the master station and data transmitted from another satellite station. Applicant submits that even assuming, *arguendo*, that the back-off time, which causes the postponement of the transmission of the control signal for a random period of time, effects the transmission of the carrier signal by the master station and the receipt of the carrier signal by the satellite station, there is no teaching or suggestion in Kobayashi of starting the controlling of the direction of an antenna of an earth station when a modem completes receiving data of a data frame.


Therefore, for at least these reasons, Applicant submits that Claim 9 is patentable over the cited combination of references and respectfully requests that the §103(a) rejection thereof be reconsidered and withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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